LG

CA-21F89X/W

MODEL

SERVICE MANUAL

ADJUSTMENT

■ Safety Precautions

1. It is safe to adjust after using insulating transformer between the power supply line and chassis input to prevent the risk of electric shock and protect the instrument.
2. Never disconnect leads while the TV receiver is on.
3. Don't short any portion of circuits while power is on.
4. The adjustment must be done by the correct appliances. But this is changeable in view of productivity.
5. Unless otherwise noted, set the line voltage to 230Vac±10%, 50Hz.

■ Test Equipment required

1. RF signal generator (with pattern generator)
2. DC Power Supply
3. Multimeter (volt meter)
4. Oscilloscope
5. Color analyzer

• RF AGC (Automatic Gain Control) Adjustment

Test Point	**: AGC TP (J17)**
Adjust	**: Remote Control**

The RF AGC was aligned at the time of manufacture for optimum performance over a wide range conditions. Readjustment of RF AGC should not be necessary unless unusual local conditions exist, such as ;

1) Channel interference in a CATV system.
2) Picture bending and/or color beats, which are unusually due to excessive RF signal input when the receiver is too close to a transmitting tower or when the receiver is connected to an antenna distribution system where the RF signal has been amplified. In this case, the input signal should be attenuated (with pad or filter) to a satisfactory level.
3) Picture noise caused by "broadcast noise" or weak signal. If the broadcast is "clean" and the RF signal is at least 1mV (60dBu), the picture will be noise free in any area.

Adjusting RF AGC to one end of rotation will usually cause a relatively poor signal to noise ratio;
Adjusting to the other end of rotation will usually cause a degradation of over load capabilities resulting in color beats or adjacent channel interference.

Adjustment

1. Connect RF signal (65dB±0.5dB) and turn on the TV.
2. Press OK buttons on TV set and Remote Controller at the same time to get into SVC mode.
3. Press Channel UP/DOWN button on the Remote Controller several times to find AGC.
4. Press Volume UP/DOWN button until the AGC Voltage is the same as the Table below.
5. Press OK(■) button to memorize the data.

TUNER	6700VPV002A(LG C&D)	6700VPV002B(LG C&D)
AGC Voltage	2.5 ± 0.1V	3.0 ± 0.1V
Default AGC Data	24	24

• Screen Voltage Adjustment

Test Point	**: RK (Red Cathode of CPT Board)**
Adjust	**: Screen Control of FBT**

1) Input the Color Bar Pattern into Antenna jack.
2) Select CutOff of SVC-3 mode.
3) Turn the screen control clockwise until the Horizontal line is visible and turn it counterclockwise until the Horizontal line is faintly visible.

• Focus Adjustment

NOTE: This adjustment should be performed after warming up for 10 minutes.

Test Point	**: Observing Display**
Adjust	**: Focus control of FBT**

1) Input the Color Bar Pattern into Antenna jack.
2) Adjust the Focus control of FBT for best overall focus.

• VCO Adjustment

1) Input Digital Pattern into Antenna jack.
2) Select A-PIF of SVC-4 mode.
3) Press VOL◀/▶ button and A-PIF will be changed 0 to 1 while the number of PIF-C is rolling.
4) When PIF-C stops rolling, A-PIF will be changed 1 to 0 and VCO adjustment is finished.

Caution : Do not press the Volume button again in A-PIF mode after adjustment is finished.

1. To get into SVC mode
1) Press OK buttons on both TV set and Remote Control at the same time.
2) Press Yellow button to select OPTION-1, OPTION-2, OPTION-3 or OPTION-4.
3) Press PR ▼/▲ button to select an adjustment.
4) Press VOL ◀/▶ button to change the data.

2. To memorize the adjusted data into EEPROM
Press OK button.

3. To get out from SVC mode
Press TV/AV or Power button.

• Deflection Data Adjustment (Line SVC-2)

1. Preparation for Adjustment

1) Select SVC-2 Mode.
2) Tune the TV set to receive Digital Pattern and set ARC Mode to Standard.

2. Initial deflection data and average data for CPT

Status	Default	21" LG	20" LG	14" LG
VL	9	9	9	9
VS	3	3	1	3
VA	37	34	39	37
HS	11	12	10	11
SC	2	2	2	2

3. Adjustment

1) VL(Vertical Linearity) Adjustment
Select VL adjustment mode to adjust the upper and lower vertical size to be the same for horizontal center line.

2) VS(Vertical Shift) Adjustment
Adjust the geometrical horizontal center line of the screen to be coincided with the vertical center line of CPT.

3) VA(Vertical Amplitude) Adjustment
Adjust the upper and lower part of big circle of the received pattern to be placed on 6~7mm from the valid screen.

4) HS(Horizontal Shift) Adjustment
Adjust the geometrical vertical center line of the received screen to be coincided with the horizontal center line of CPT.

5) SC(Vertical S Correction) Adjustment
Adjust the width of upper/center/lower grid of the received pattern to be the same.

• SECAM Background Color Adjustment(CT-, CF-)

1. Preparation for Adjustment

Select “S R-Y” or “S B-Y” of SVC Mode 4.

2. Adjustment

While switching SECAM and PAL channels in turns, press VOL ◀/▶ key until the background color of SECAM channel to be the same as that of PAL Pattern at S R-Y or S B-Y.

• White Balance Adjustment.(LINE SVC-1)

NOTE : This adjustment should be performed after screen voltage adjustment.

1) Tune the TV set to receive 100% white pattern.
2) Select SVC-1 Mode.
3) Press PR UP/DOWN key to select BG, GG, BG, GC.
   Adjust BG, GG on Brightness 40±1FL and BG, GC on Brightness 4.5±0.5FL with VOL◀/▶ key to get the color value.
4) Adjust BG, GG from the initialized data to get the color value of X=281±8, Y=288±8.
5) R,G,B initial data and average data

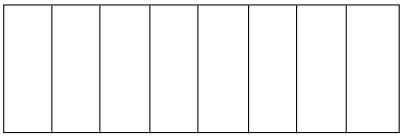
Status	Initial Data	Remark
RC	127	
GC	147	
BC	123	
GG	59	
BG	64	

• Sub Brightness Adjustment

NOTE: This adjustment should be performed after White Balance adjustment.

1) Input FUBK pattern to Antenna jack.
2) Select S-BRI of SVC-3 mode.
3) Press VOL ◀/▶ until (a) and (b) of FUBK are distinct and press VOL ▶ twice more.

(a) (b)



• OPTION Adjustment (SVC MODE:OPTION-1, OPTION-2)

NOTE: When the EEPROM has been replaced, the Option data should be restored as the function of individual system and specification.

1) Press OK buttons on both TV set and Remote Controller at the same time to get into SVC mode.
2) Press the Yellow button several times to find OPTION-1 or OPTION-2.
3) Input the correspond OPTION data referring to Table below with the numeric buttons 0~9.

Table 1. OPTION 1 Function

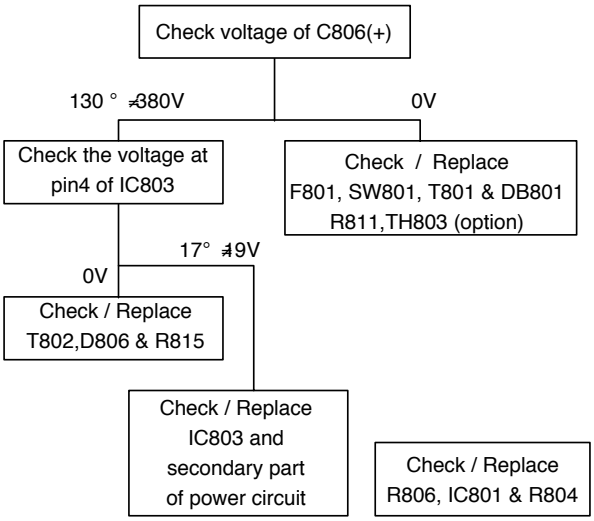
Option	Code	Function	Remark
SYSTEM	0	BG Only	Single SYSTEM(CA-)
	1	BG+TAI DUAL	South East Asian DUAL
	2	BG+I+DK	W/O RF 3.58(CF-,CZ-)
	3	BG+I+DK+M	W/RF 3.58(CT-,CD-)
CCTV	0	W/O CCTV	
	1	W/CCTV	
SCART	0	Phono Jack or Camera-in Jack	
	1	Scart Jack	with RGB Input
4 KEY	0	6 Key(MENU, OK, VOL-, VOL+, PR-, PR+)	
	1	4 Key(TV/AV, ROTATE, PR-, PR+)	
EYE	0	W/O EYE	
	1	W/EYE	
TOP	0	Teletext Top function Disable	
	1	Teletext Top function Enable	
H-TONE	0	Blue Background OSD MENU	
	1	Half Tone OSD MENU	

Table 2. OPTION 2 Function

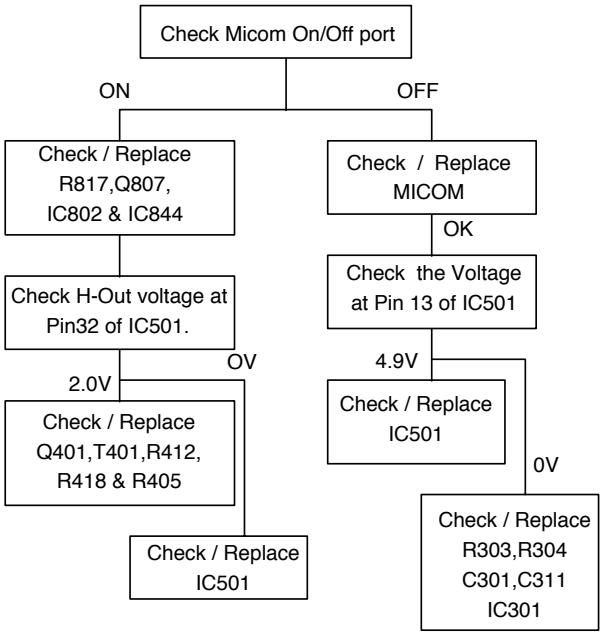
Option	Code	Function	Remark
LANG.	0 0	Multi	
	0 1	English Only	
	1 0	TWO Lang.	
LANG-INDEX	0	English	LG8993-27A/B
	1	CIS	
	2	China	
	3	Romania	
	4	Poland	
	0	English	LG8993-28A
	1	France	
	2	Hindi	
	3	Arab	
	4	Urdu	
	5	Parsi	
	0	English	LG8993-29A
	1	Indonesia	
	2	Malay	
	3	Vietnam	
	4	Thai	
CURVE	0	Fast Volume Curve	
	1	Slow Volume Curve	
TBS	0	TBS Function Disable	
	1	TBS Function Enable	
HOTEL	0	HOTEL Function Disable	
	1	HOTEL Function Enable	

TROUBLESHOOTING

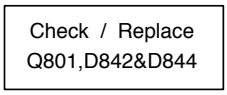
1. No Power (Not working SMPS)


Check voltage of C806(+)
130 ° ≠380V
0V
Check the voltage at pin4 of IC803
Check / Replace F801, SW801, T801 & DB801 R811,TH803 (option)
17° ≠19V
0V
Check / Replace T802,D806 & R815
Check / Replace IC803 and secondary part of power circuit
Check / Replace R806, IC801 & R804

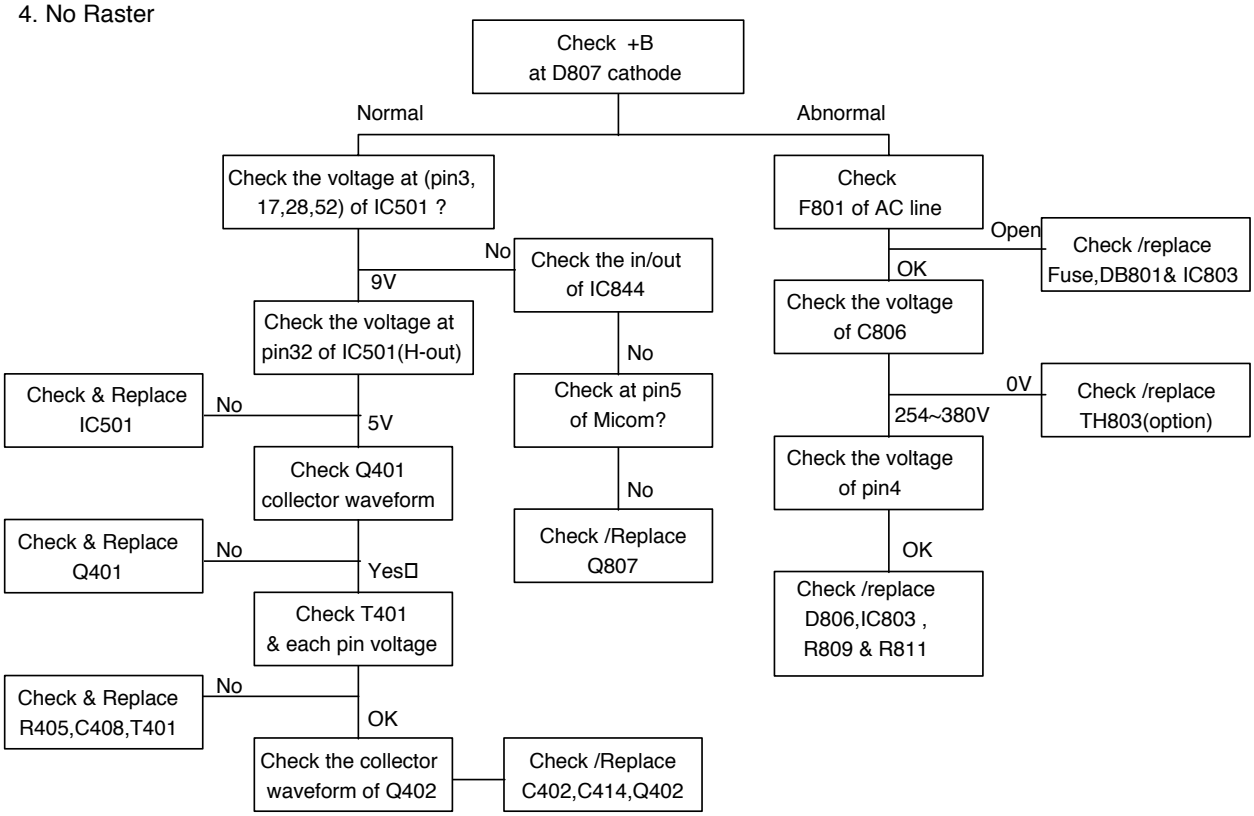
2. No Power On (SMPS working)



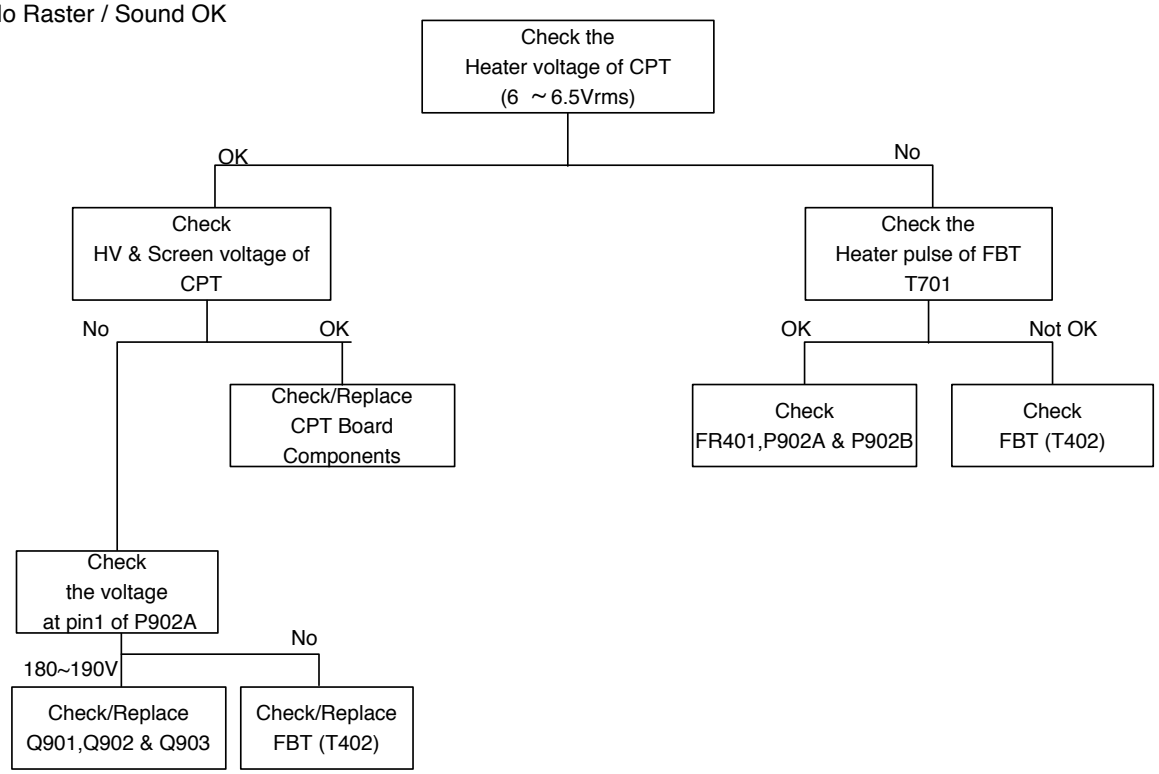
3. No Power off (SMPS working)



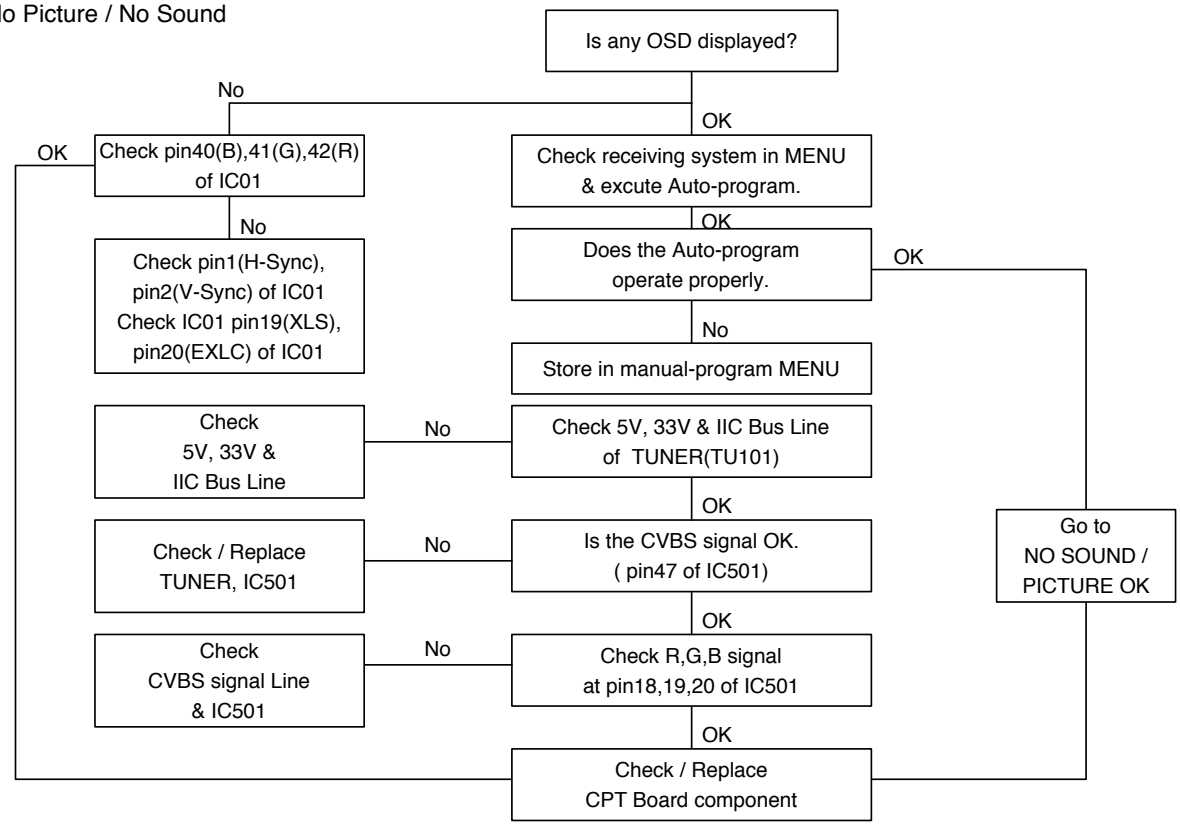
4. No Raster



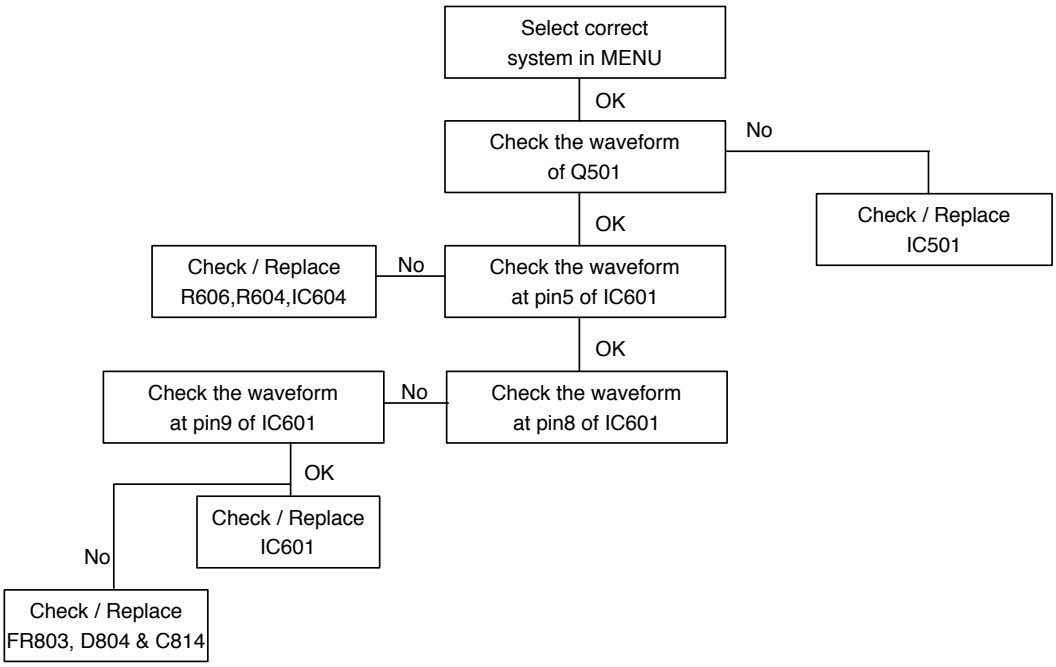
6. No Raster / Sound OK



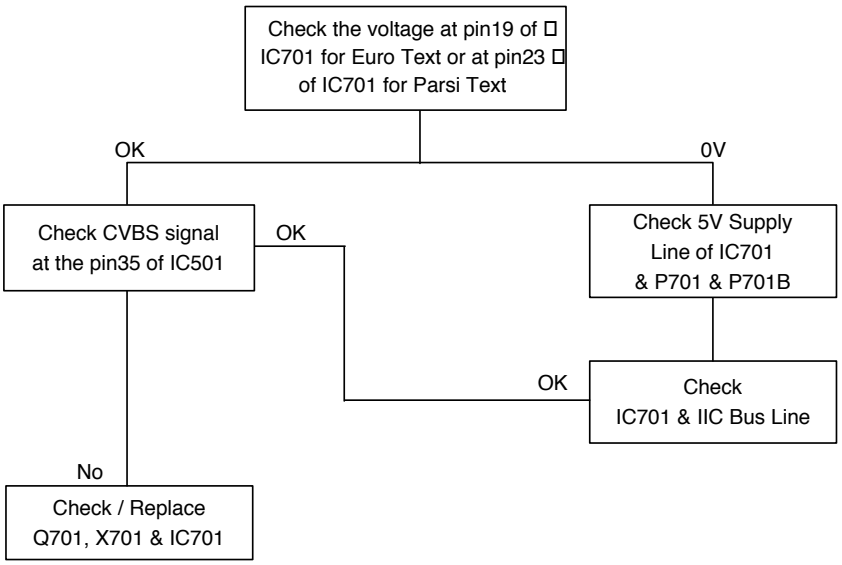
7. No Picture / No Sound



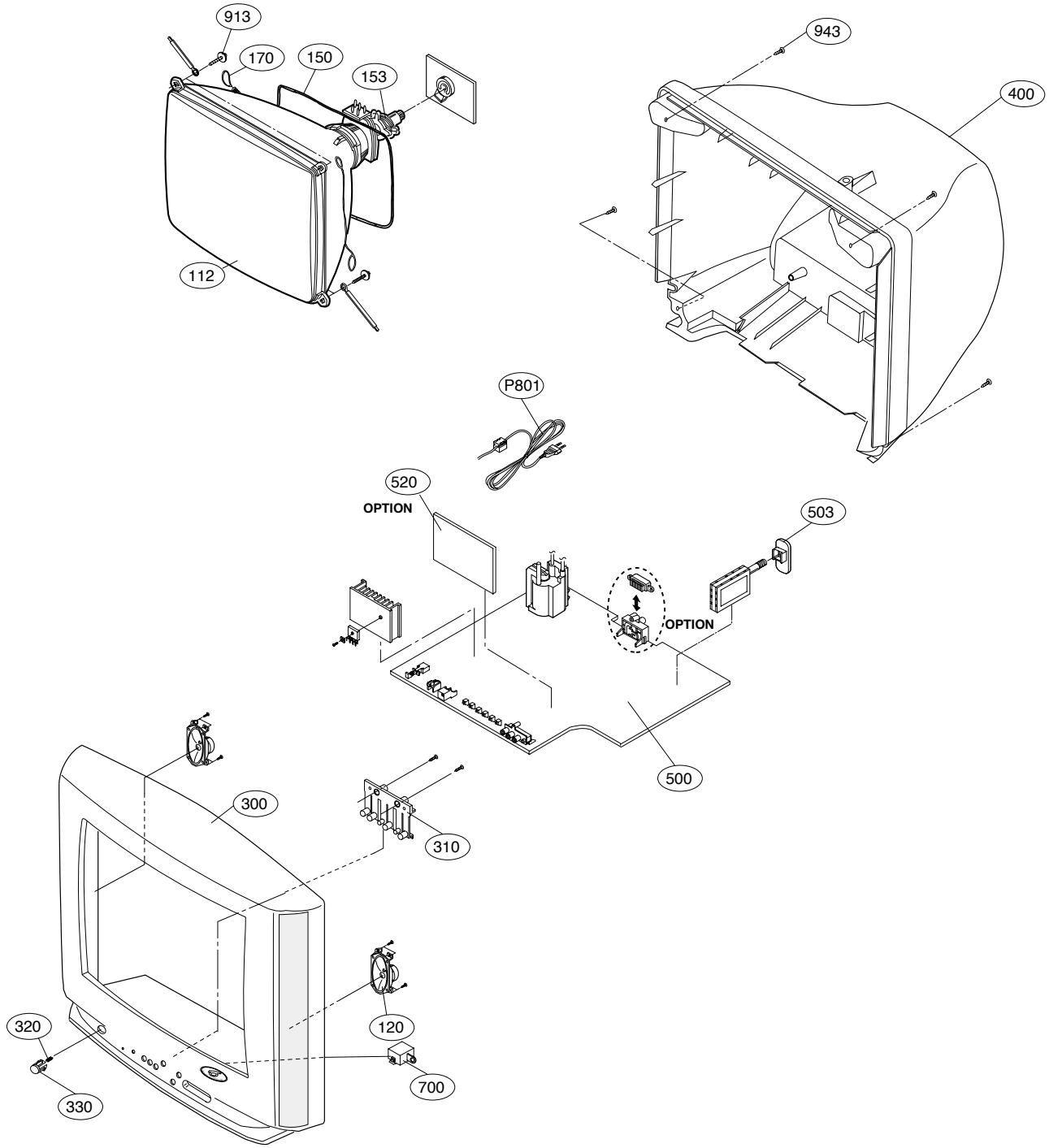
5. No Sound/picture OK



8. No Teletext


Check the voltage at pin19 of IC701 for Euro Text or at pin23 of IC701 for Parsi Text
OK
0V
Check CVBS signal at the pin35 of IC501
OK
Check 5V Supply Line of IC701 & P701 & P701B
OK
Check IC701 & IIC Bus Line
No
Check / Replace Q701, X701 & IC701

EXPLODED VIEW



EXPLODED VIEW PARTS LIST

The components identified by mark ⚠ is critical for safety.
Replace only with part number specified.

NO	PART NO		DESCRIPTIONS
	20"	21"	
⚠ 112	2055-V1221A	6341V21002A	CPT
120	120-487D	120-487D	SPEAKER,C112P01K145G 16 OHM
⚠ 150	150-D02Y	150-D02X	COIL,DEGAUSSING
⚠ 153	153-276A	153-110F	DY
⚠ 170	170-A01D	170-A01D	LEAD SET,CPT EARTH(19")
300	3091V00212F	3091V00195G	CABINET ASSY
310	5020V00194C	5020V00195C	BUTTON,CONTROL
320	320-062H	320-062H	SPRING,COIL
330	5020V00196C	5020V00196B	BUTTON,POWER
400	3809V00096H	3809V00596B	BACK COVER ASSY
500	3141VMN495N	3141VMN495P	CHASSIS ASSY,MAIN
700	0IGL120104A	0IGL120104A	IC,CDS SENSOR MODULE(P1201-04)
913	332-057B	332-057B	SCREW ASSY,HEXAGON HEAD
943	1PTF0403116	1PTF0403116	SCREW,TAP TITE D4.0 L16.0
⚠ P801	174-009E	174-009E	CORD,POWER(W/HOLD,HOUSING,L=200,4.0

REPLACEMENT PARTS LIST

The components identified by mark ⚠ is critical for safety.
Replace only with part number specified.

For Capacitor & Resistors, the charactors at 2nd and 3rd digit in the P/No. means as follows;
CC, CX, CK, CN : Ceramic
CQ : Polyestor
CE : Electrolytic
RD : Carbon Film
RS : Metal Oxide Film
RN : Metal Film
RF : Fusible

LOCA. NO	PART NO	DESCRIPTION
IC		
IC01	0IMI899329A	IC,LG8993-29A *ASIA
"	0IMI899327A	IC,LG8993-27A *CIS
IC02	0IAL240410A	IC,AT24C04-10PC 8D EEPROM(4K,IIC)
IC03	0ISS754200A	IC,KA7542Z RESET TO92 TP 4.2V
IC151	0ISG405200B	IC,HCF4052BE 16P DIP BK
IC202	0ISA701600A	IC,LA7016 8S ANALOG S/W
⚠ IC301	0ISA783300A	IC,LA7833 7S 2.2A(P-P) VERT. OUT
IC501	0ITO123800C	IC,TB1238BN 56P,SDIP BK MULTI 1CH
IC502	0ITO127500A	IC,TA1275AZ 21P SZIP BK
IC505	0IKE780500K	IC,KIA7805PI 3P(TO-220IS) 5V,1A
IC601	0ISG725300A	IC,TDA7253 11P,SIP BK 8W AUDIO AM
⚠ IC801	0ILI817000G	IC,LTV817M-VB 4P,DIP BK PHOTO COU
IC802	0ILI817000G	IC,LTV817M-VB 4P,DIP BK PHOTO COU
⚠ IC803	0ISK670713A	IC,STR-F6707(LF1352) 5P,SIP BK ST
⚠ IC804	0ISK110000A	IC,SE110N(LF12) 3P 110V ERROR AMP
"(21")	0ISK115000A	IC,SE115N(LF12) 3P 115V ERROR AMP
IC844	0ISH092100A	IC,PQ09RF21 4P 9V S/W REGULATOR
DIODE		
D01	0DD414809ED	DIODE,1N4148 TA
D02	0DD414809ED	DIODE,1N4148 TA
D101	0DD859009AA	DIODE,SILICON MA859
D301	0DD150009CA	DIODE,RECTIFIER RGP15J,TP(52MM)
D302	0DD400509AA	DIODE,RECTIFIER 1N4005 GP
D501	0DD414809ED	DIODE,1N4148 TA
D504	0DD414809ED	DIODE,1N4148 TA
D505	0DD060009AC	DIODE,TVR06J 0.6A/600V 250NS
D506	0DD414809ED	DIODE,1N4148 TA
D801	0DR200000DA	DIODE,RECTIFIER FMG-G2CS BK
D802	0DD100009AM	DIODE,RECTIFIER EU1ZV(1)
D803	0DD414809ED	DIODE,1N4148 TA
D804	0DD150009CA	DIODE,RECTIFIER RGP15J
D805	0DD200009AH	DIODE,RECTIFIER RU2AMV(1)
D806	0DD100009AM	DIODE,RECTIFIER EU1ZV(1)
D807	0DD300009AC	DIODE,RECTIFIER RU3AMV(1)
D808	0DD060009AC	DIODE,TVR06J 0.6A/600V 250NS
D840	0DR010009AA	DIODE,RECTIFIER EG01C 1000V 0.5A
D901	0DD400309AD	DIODE,RECTIFIER IN4003A
D902	0DD414809ED	DIODE,1N4148 TA
⚠ DB801	0DB260000AA	DIODE,BRIDGE G2SBA60 G.I 600V 1.5A 60A
ZD101	0DZ510009AB	DIODE,ZENER MTZ5.1B,TP(52MM)
ZD102	0DZ330009DF	DIODE,ZENER MTZJ33B TP 0.5W 33
ZD412	0DZ910009AJ	DIODE,ZENER MTZJ9.1B TP 0.5W 9
ZD501	0DZ180009AG	DIODE,ZENER MTZJ18B TP 500MW
ZD502	0DZ180009AG	DIODE,ZENER MTZJ18B TP 500MW
ZD503	0DZ180009AG	DIODE,ZENER MTZJ18B TP 500MW
ZD504	0DZ510009AB	DIODE,ZENER MTZ5.1B,TP(52MM)
ZD505	0DZ120009AF	DIODE,ZENER MTZJ12B TP ROHM-K 500MW
ZD801	0DZ510009AB	DIODE,ZENER MTZ5.1B,TP(52MM)
ZD802	0DZ120009AF	DIODE,ZENER MTZJ12B TP ROHM-K 500MW
TRANSISTOR		
Q01	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q02	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q101	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q103	0TR319709AB	TR,KTC3197,TP(KTC388A),KEC
Q151	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q154	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q155	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q201	0TR126609AA	TR,KTA1266-TP-Y (KTA1015) KEC
Q220	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q221	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q401	0TR322809AA	TR,KTC3228-0 TP(KTC2383),KEC
⚠ Q402	0TR249900AA	TR,KTD2499 TO-3P(H)IS TOSHIBA
Q503	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q505	0TR126609AA	TR,KTA1266-TP-Y (KTA1015) KEC
Q506	0TR126609AA	TR,KTA1266-TP-Y (KTA1015) KEC
Q507	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q520	0TR319709AB	TR,KTC3197,TP(KTC388A),KEC
Q601	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q807	0TR945009AA	TR,KSC945C-Y TP SAMSUNG
Q901	0TR233009CA	TR,KSC2330-Y TP SAMSUNG TO-92L
Q902	0TR233009CA	TR,KSC2330-Y TP SAMSUNG TO-92L
Q903	0TR233009CA	TR,KSC2330-Y TP SAMSUNG TO-92L
CAPACITOR		
C01	0CN1010K519	100P 50V K
C02	0CN1030F679	10000P 16V M
C04	0CN1030F679	10000P 16V M
C08	0CN1030F679	10000P 16V M
C09	0CE107DD618	100UF STD 10V M
C10	0CN2210K519	220P 50V K
C13	0CN1030F679	10000P 16V M
C16	0CN2210K519	220P 50V K
C17	0CN2210K519	220P 50V K
C18	0CN2210K519	220P 50V K
C19	0CN1030F679	10000P 16V M
C20	0CE108DD618	1000UF STD 10V M
C22	0CX5600K409	56P 50V J
C23	0CX5600K409	56P 50V J
C27	0CN1040K949	0.1M 50V Z
C28	0CN1040K949	0.1M 50V Z
C29	0CN1040K949	0.1M 50V Z
C91	0CN2210K519	220P 50V K
C100	0CN1030F679	10000P 16V M
C101	0CN1030F679	10000P 16V M

For Capacitor & Resistors, the charactors at 2nd and 3rd digit in the P/No. means as follows;

CC, CX, CK, CN : Ceramic
CQ : Polyestor
CE : Electrolytic

RD : Carbon Film
RS : Metal Oxide Film
RN : Metal Film
RF : Fusible

The components identified by mark ⚠ is critical for safety.
Replace only with part number specified.

LOCA. NO	PART NO	DESCRIPTION
C102	0CN1040K949	0.1M 50V Z
C103	0CE105DK618	1UF STD 50V M
C104	0CE107DD618	100UF STD 10V M
C107	0CX5600K409	56P 50V J
C108	0CX5600K409	56P 50V J
C109	0CE106DK618	10UF STD 50V M
C112	0CE475DK618	4.7000UF STD 50V M
C113	0CN1030F679	10000P 16V M
C114	0CN1030F679	10000P 16V M
C115	0CN1030F679	10000P 16V M
C151	0CE106DK618	10UF STD 50V M
C152	0CN1040K949	0.1M 50V Z
C153	0CX4700K409	47P 50V J
C154	0CX3900K409	39P 50V J
C155	0CN3310K519	330P 50V K
C159	0CN1040K949	0.1M 50V Z
C201	0CE226DF618	22UF STD 16V M
C202	0CX3900K409	39P 50V J
C221	0CE476DF618	47UF STD 16V M
C222	0CE106DK618	10UF STD 50V M
C223	0CE106DK618	10UF STD 50V M
C225	0CX5100K409	51P 50V J
C226	0CX5100K409	51P 50V J
C227	0CE106DK618	10UF STD 50V M
C258	0CE106DK618	10UF STD 50V M
C301	181-007H	ECQ-V1H474JZ3(TR),50V 0.4
C303	0CK4710W515	470PF 500V K
C304	0CK4710W515	470PF 500V K
C305	0CN1020K519	1000P 50V K
C306	0CN1020K519	1000P 50V K
C307	0CE107DJ618	100UF STD 35V M
C308	0CN1020K519	1000P 50V K
C309	0CE477DJ618	470UF STD 35V M
C310	0CQ1041N509	0.1U 100V K
C311	0CE228DJ61A	2200UF STD 35V M
C312	0CE104DK618	0.1000UF STD 50V M
"	0CQ1041N509	0.1UF 100V K *CF-
C313	0CQ1052K439	1UF S 50V J
"	181-007T	ECQ-V1H105JZ3 *CF-
C314	0CQ6831N509	0.068U 100V K
C315	0CE474DK618	0.4700UF STD 50V M
C402	181-091V	2KV R 391K TP7.5
C404	0CQ1531N509	0.015U 100V K
C405	0CE476DF618	47UF STD 16V M
C406	0CN1030F679	10000P 16V M
C408	0CE106DK618	10UF STD 50V M
C412	181-013P	MPP 400V 0.33UF J
"(21")	181-013B	MPP 200V 0.36UF J
C413	0CK2220W515	2200P 500V K B
C414	181-015F	MPP 1600V 0.0073UF H
C418	181-009R	PP 200V 0.022UF K
C501	0CQ3321N509	0.0033U 100V K

LOCA. NO	PART NO	DESCRIPTION
C502	0CQ2221N509	0.0022U 100V K
C503	0CE224DK618	0.2200UF STD 50V M
C504	0CX1100K409	11P 50V J
C505	0CN1020K519	1000P 50V K
C506	0CN1040K949	0.1M 50V Z
C507	0CE227DF618	220UF STD 16V M
C508	0CE337DF618	330UF STD 16V M
C509	0CN1030F679	10000P 16V M
C510	0CE107DD618	100UF STD 10V M
C511	0CE226DF618	22UF STD 16V M
C512	0CE105DK618	1UF STD 50V M
C513	0CE105DK618	1UF STD 50V M
"	181-007F	ECQ-V1H224JZ3 *CF-
C514	0CE337DF618	330UF STD 16V M
C515	0CN1030F679	10000P 16V M
C516	0CE107DD618	100UF STD 10V M
C517	0CE105DK618	1UF STD 50V M
C518	0CQ6821N509	0.0068U 100V K
"	0CQ3921N409	0.0039U 100V J *CF-
C519	0CE474DK618	0.4700UF STD 50V M
C520	0CN1030F679	10000P 16V M
C521	0CE476DF618	47UF STD 16V M
C522	0CN1030F679	10000P 16V M
C525	0CQ4742K439	0.4700UF S 50V J
"	181-007H	ECQ-V1H474JZ3 *CF-
C526	181-007G	ECQ-V1H334JZ3(TR),50V 0.3
"	181-007F	ECQ-V1H224JZ3(TR) *CF-
C527	0CE106DK618	10UF STD 50V M
C528	0CX5600K409	56P 50V J
C529	0CX5600K409	56P 50V J
C530	0CE105DK618	1UF STD 50V M
C532	0CN4710K519	470P 50V K
C540	0CE106DR618	10UF STD 250V M
C550	0CE106DF618	10UF STD 16V M
C551	0CE106DF618	10UF STD 16V M
C552	0CN1030F679	10000P 16V M
C553	0CE107DF618	100UF STD 16V M
C554	0CE104DK618	0.1000UF STD 50V M
C555	0CN1020K519	1000P 50V K
C560	0CN1030F679	10000P 16V M
C562	0CQ2731N509	0.027U 100V K
C563	0CN1030F679	10000P 16V M
C564	0CE476DD618	47UF STD 10V M
C565	0CN1030F679	10000P 16V M
C566	0CE105DK618	1UF STD 50V M
C567	0CE107DD618	100UF STD 10V M
C568	0CE105DK618	1UF STD 50V M
C569	0CE105DK618	1UF STD 50V M
C573	0CN1030F679	10000P 16V M
C574	0CN1030F679	10000P 16V M
C601	0CE477DJ618	470UF STD 35V M
C603	0CQ1041N509	0.1U 100V K

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LOCA. NO	PART NO	DESCRIPTION
C604	0CE106DK618	10UF STD 50V M
C605	0CE477DJ618	470UF STD 35V M
C606	0CE476DF618	47UF STD 16V M
C607	0CQ4721N509	0.0047U 100V K
C608	0CE107DF618	100UF STD 16V M
C801	0CE227BJ618	220U KME 35V M
C802	0CE476BK618	47UF KME 50V M
C803	0CK10201515	1000P 1KV K
C804	0CQ1041N509	0.1U 100V K
⚠ C806	0CEZVBK002B	220000000F 0 500V M
C807	181-033S	2KV B 122K TP7.5
C808	181-033S	2KV B 122K TP7.5
⚠ C809	0CQZVBK002C	A.C 275V 0.22UF K
"	0CQZVBK002A	A.C 275V 0.1UF M *CF-
⚠ C810	0CQZVBK002C	A.C 275V 0.22UF K
C811	181-091X	2KV R 561K TP7.5
C812	0CE227DF618	220UF STD 16V M
C813	0CK4710W515	470PF 500V K
C814	0CE337DK618	330UF STD 50V M
C815	0CK4710W515	470PF 500V K
C816	0CE108DF618	1000UF STD 16V M
C817	0CK4710W515	470PF 500V K
C818	0CE477BH618	470UF KME TYPE 25V M
C819	181-091Y	2KV R 681K TP7.5
C820	181-003C	CE 160V 47UF T
"	0CE227DP61A	220UF STD 160V M *CF-
C823	0CK1520W515	1500P 500V K
C824	0CE107DJ618	100UF STD 35V M
C825	181-091R	1KV R 102K TP5
C826	181-033K	2KV B 271K TP5
"	181-091N	1KV SL 101J *CF-
C827	0CE227DF618	220UF STD 16V M
C828	0CE1071P61A	100UF SM 160V M
"	0CE227DP61A	220UF STD 160V M *CF-
C829	181-091Y	2KV R 681K TP7.5
C830	0CE476DF618	47UF STD 16V M
C832	181-091N	1KV SL 101J TP5
C833	181-033L	2KV B 331K TP5
C850	181-120K	ACT 4KV E 222M TP10
C851	181-120C	ACT 4KV B 471K
C901	0CE475DR618	4.7000UF STD 250V M
C902	0CN5610K519	560P 50V K
C904	0CN3310K519	330P 50V K
C907	0CN5610K519	560P 50V K
C908	181-033S	2KV B 122K TP7.5

CORE

FB401	125-022K	CORE (CIRC),BEAD FERRITE 1UH
FB801	125-022K	CORE (CIRC),BEAD FERRITE 1UH
FB802	125-022K	CORE (CIRC),BEAD FERRITE 1UH
FB803	125-022K	CORE (CIRC),BEAD FERRITE 1UH
FB804	125-123A	CORE (CIRC),FERRITE BFD3565R2F
J76	125-022K	CORE (CIRC),BEAD FERRITE 1UH
J97	125-022K	CORE (CIRC),BEAD FERRITE 1UH
J123	125-022K	CORE (CIRC),BEAD FERRITE 1UH
J125	125-022K	CORE (CIRC),BEAD FERRITE 1UH
L206	125-022K	CORE (CIRC),BEAD FERRITE 1UH
L292	125-123A	CORE (CIRC),FERRITE BFD3565R2F

COIL & TRANSFORMER

J56	0LA0102K119	INDUCTOR,10UH K
L03	0LA0102K119	INDUCTOR,10UH K
L105	0LA0820K119	INDUCTOR,0.82UH K
L151	0LA0821K119	INDUCTOR,8.2UH K
L290	0LA1000K119	INDUCTOR,100UH K
L291	0LA1000K119	INDUCTOR,100UH K
L401	150-L02C	COIL,H-LINEARITY 170UH
L501	0LA0102K119	INDUCTOR,10UH K
L505	0LA0561K119	INDUCTOR,5.6UH K
L506	150-E10W	COIL,IFT 38.9MHZ 39PF
L509	0LA0102K119	INDUCTOR,10UH K
L803	150-C02F	COIL,CHOKE 82UH R1217
L901	0LA1200K139	INDUCTOR,120UH K
T401	6170VC0003A	TRANSFORMER,HORIZONTAL DRIVER 10MM
⚠ T402	6174Z-8005C	FBT,FTSPN13-T8005C
"(21")	6174V-8006A	FBT,DNF-FXC0001 ETC DNF
⚠ T801	150-F06J	COIL,LINE FILTER SQE2930 18MH
⚠ T802	6170VMFA06M	TRANSFORMER,SMPS EER4215 740UH

RESISTOR

⚠ FR301	0RF0101J607	1 1W 5% TA62
⚠ FR401	180-D02H	RNF RND(S) CR 2W 1.4 J
"(21")	180-D02E	RNF RND(S) CR 2W 1.0 J
⚠ FR501	0RF0101J607	1 1W 5% TA62
⚠ FR803	0RF0470J607	0.47 1W 5% TA62
J6	0RD1000F609	100 1/6W 5 TA52
J33	0RD1002F609	10K 1/6W 5 TA52
J42	0RD0101F609	1.0 1/6W 5 TA52
J128	0RD0101F609	1.0 1/6W 5 TA52
J136	0RD0101F609	1.0 1/6W 5 TA52
J138	0RF0470H609	0.47 1/2W 5 TA52
L206	0RD0101F609	1.0 1/6W 5 TA52
R01	0RD1001F609	1.0K 1/6W 5 TA52
R02	0RD2200F609	220 1/6W 5 TA52
R03	0RD1000F609	100 1/6W 5 TA52
R04	0RD4701F609	4.70K 1/6W 5% TA52
R05	0RD4701F609	4.70K 1/6W 5% TA52
R07	0RD1000F609	100 1/6W 5 TA52
R08	0RD1000F609	100 1/6W 5 TA52
R09	0RD1000F609	100 1/6W 5 TA52
R12	0RD1000F609	100 1/6W 5 TA52
R13	0RD1001F609	1.0K 1/6W 5 TA52
R14	0RD2402F609	24K 1/6W 5 TA52
R15	0RD4702F609	47K 1/6W 5 TA52

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LOCA. NO	PART NO	DESCRIPTION
R16	0RD1000F609	100 1/6W 5 TA52
R17	0RD1000F609	100 1/6W 5 TA52
R18	0RD4700F609	470 1/6W 5 TA52
R19	0RD4700F609	470 1/6W 5 TA52
R20	0RD2000F609	200 1/6W 5 TA52
R21	0RD1000F609	100 1/6W 5 TA52
R22	0RD1000F609	100 1/6W 5 TA52
R23	0RD1000F609	100 1/6W 5 TA52
R25	0RD4701F609	4.70K 1/6W 5% TA52
R26	0RD4701F609	4.70K 1/6W 5% TA52
R27	0RD4701F609	4.70K 1/6W 5% TA52
R31	0RD4702F609	47K 1/6W 5 TA52
R32	0RD2202F609	22K 1/6W 5 TA52
R33	0RD1002F609	10K 1/6W 5 TA52
R34	0RD1002F609	10K 1/6W 5 TA52
R35	0RD4701F609	4.70K 1/6W 5% TA52
R38	0RD7501F609	7.5K 1/6W 5 TA52
R39	0RD7501F609	7.5K 1/6W 5 TA52
R40	0RD7501F609	7.5K 1/6W 5 TA52
R44	0RD4701F609	4.70K 1/6W 5% TA52
R45	0RD1002F609	10K 1/6W 5 TA52
R46	0RD4701F609	4.70K 1/6W 5% TA52
R47	0RD1000F609	100 1/6W 5 TA52
R51	0RD4701F609	4.70K 1/6W 5% TA52
R52	0RD4701F609	4.70K 1/6W 5% TA52
R54	0RD1000F609	100 1/6W 5 TA52
R55	0RD1000F609	100 1/6W 5 TA52
R56	0RD4701F609	4.70K 1/6W 5% TA52
R57	0RD4701F609	4.70K 1/6W 5% TA52
R58	0RD4701F609	4.70K 1/6W 5% TA52
R59	0RD4701F609	4.70K 1/6W 5% TA52
R60	0RD4701F609	4.70K 1/6W 5% TA52
R63	0RD4701F609	4.70K 1/6W 5% TA52
R90	0RD0101F609	1.0 1/6W 5 TA52
R100	0RD0392F609	39 1/6W 5% TA
R101	0RD1201F609	1.2K 1/6W 5 TA52
R102	0RD2701F609	2.7K 1/6W 5 TA52
R103	0RD0272F609	27 1/6W 5 TA52
R104	0RD1000F609	100 1/6W 5 TA52
R105	0RD1000F609	100 1/6W 5 TA52
R106	0RD1201F609	1.2K 1/6W 5 TA52
R107	0RD0562F609	56 1/6W 5% TA52
R110	0RS0392K607	39 2W 5% TA62
R130	0RD2200F609	220 1/6W 5 TA52
R151	0RD1000F609	100 1/6W 5 TA52
R152	0RD1000F609	100 1/6W 5 TA52
R153	0RD0102F609	10 1/6W 5 TA52
R154	0RD1501F609	1.5K 1/6W 5 TA52
R155	0RD9101F609	9.1K 1/6W 5 TA52
R156	0RD4700F609	470 1/6W 5 TA52
R157	0RD3301F609	3.3K 1/6W 5 TA52
R158	0RD3900F609	390 1/6W 5 TA52

LOCA. NO	PART NO	DESCRIPTION
R164	0RD2200F609	220 1/6W 5 TA52
R165	0RD2200F609	220 1/6W 5 TA52
R166	0RD2200F609	220 1/6W 5 TA52
R168	0RD1002F609	10K 1/6W 5 TA52
R169	0RD1002F609	10K 1/6W 5 TA52
R170	0RD1001F609	1.0K 1/6W 5 TA52
R171	0RD1001F609	1.0K 1/6W 5 TA52
R201	0RD0682F609	68 1/6W 5 TA52
R202	0RD4700F609	470 1/6W 5 TA52
R203	0RD3600F609	360 1/6W 5 TA52
R206	0RD5101F609	5.1K 1/6W 5 TA52
R209	0RD1001F609	1.0K 1/6W 5 TA52
R210	0RD0101F609	1.0 1/6W 5 TA52
R212	0RD6200F609	620 1/6W 5 TA52
R213	0RD1002F609	10K 1/6W 5 TA52
R214	0RD1001F609	1.0K 1/6W 5 TA52
R215	0RD1203F609	120K 1/6W 5 TA52
R221	0RD3000F609	300 1/6W 5 TA52
R222	0RD1201F609	1.2K 1/6W 5 TA52
R223	0RD1001F609	1.0K 1/6W 5 TA52
R224	0RD6202F609	62K 1/6W 5 TA52
R226	0RD1001F609	1.0K 1/6W 5 TA52
R228	0RD1801F609	1.8K 1/6W 5 TA52
R240	0RD0752F609	75 1/6W 5% TA
R290	0RD2200H609	220 1/2W 5% TA52
R291	0RD2200H609	220 1/2W 5% TA52
R303	0RD0391H609	3.9 1/2W 5 TA52
“(21”)	0RD0331H609	3.3 1/2W 5 TA52
R304	0RD0471H609	4.7 1/2W 5 TA52
“(21”)	0RD0391H609	3.9 1/2W 5 TA52
R305	0RD5102F609	51K 1/6W 5 TA52
R306	0RD4701F609	4.70K 1/6W 5% TA52
R309	0RD1201H609	1.2K 1/2W 5 TA52
“(21”)	0RD3001H609	3K 1/2W 5 TA52
R310	0RD0221H609	2.2 1/2W 5 TA52
R311	0RD1501F609	1.5K 1/6W 5 TA52
“(21”)	0RD1201F609	1.2K 1/6W 5 TA52
R312	0RD1001F609	1.0K 1/6W 5 TA52
R313	0RD8202F609	82K 1/6W 5 TA52
R314	0RD9100F609	910 1/6W 5 TA52
R315	0RD3900H609	390 1/2W 5 TA52
R402	0RS1002H609	10K 1/2W 5 TA52
R403	0RD5100H609	510 1/2W 5 M15
R405	0RD0472H609	47 1/2W 5 TA52
“	0RS0472J607	47 1W 5% TA62 *CF-
R407	0RS1202J607	12K 1W 5% TA62
“(21”)	0RS1502J607	15K 1W 5% TA62
R409	0RD0332H609	33 1/2W 5 TA52
R410	0RD1003H609	100K 1/2W 5 TA52
“(21”)	0RD9102H609	91K 1/2W 5 TA52
R411	0RD4700F609	470 1/6W 5 TA52
R412	0RD3600F609	360 1/6W 5 TA52

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LOCA. NO	PART NO	DESCRIPTION
R413	0RD3300H609	330 1/2W 5 TA52
R414	0RD1502F609	15K 1/6W 5 TA52
R418	0RD1200F609	120 1/6W 5 TA52
R501	0RD3002F609	30K 1/6W 5 TA52
R502	0RD1000F609	100 1/6W 5 TA52
R503	0RD1000F609	100 1/6W 5 TA52
R504	0RD1000F609	100 1/6W 5 TA52
R505	0RD3302F609	33K 1/6W 5% TA52
R506	0RD1000F609	100 1/6W 5 TA52
R507	0RD1000F609	100 1/6W 5 TA52
R508	0RD1001F609	1.0K 1/6W 5 TA52
R509	0RD1001F609	1.0K 1/6W 5 TA52
R510	0RD4701F609	4.70K 1/6W 5% TA52
R511	0RD1200F609	120 1/6W 5 TA52
"	0RD5100F609	510 1/6W 5 TA52 *CF-
R512	0RD2202F609	22K 1/6W 5 TA52
R513	0RD1500F609	150 1/6W 5 TA52
"	0RD5600F609	560 1/6W 5 TA52 *CF-
R514	0RD4703F609	470K 1/6W 5 TA52
R515	0RD1000F609	100 1/6W 5 TA52
R516	0RD2201F609	2.2K 1/6W 5 TA52
R517	0RD3002F609	30K 1/6W 5 TA52
R518	0RD1302F609	13K 1/6W 5 TA52
R519	0RD1502F609	15K 1/6W 5 TA52
R520	0RD1202F609	12K 1/6W 5 TA52
R521	0RD1000F609	100 1/6W 5 TA52
R523	0RD0102F609	10 1/6W 5 TA52
R524	0RD1000F609	100 1/6W 5 TA52
R525	0RD6801F609	6.8K 1/6W 5 TA52
R526	0RD2201F609	2.2K 1/6W 5 TA52
R527	0RD1000F609	100 1/6W 5 TA52
R528	0RD2200F609	220 1/6W 5 TA52
R529	0RD0752F609	75 1/6W 5% TA
R530	0RD1000F609	100 1/6W 5 TA52
R531	0RS0682J607	68 1W 5% TA62
R532	0RD3902F609	39K 1/6W 5 TA52
R533	0RD3900F609	390 1/6W 5 TA52
R535	0RD2200F609	220 1/6W 5 TA52
R536	0RD2201F609	2.2K 1/6W 5 TA52
R538	0RD5102F609	51K 1/6W 5 TA52
R539	0RD1002F609	10K 1/6W 5 TA52
R540	0RD1002F609	10K 1/6W 5 TA52
R548	0RD1002F609	10K 1/6W 5 TA52
R549	0RD1001F609	1.0K 1/6W 5 TA52
R550	0RD2001F609	2.0K 1/6W 5 TA52
R551	0RD2001F609	2.0K 1/6W 5 TA52
R552	0RD2001F609	2.0K 1/6W 5 TA52
R554	0RS0472H609	47 1/2W 5 TA52
R555	0RD2203H609	220K 1/2W 5 TA52
R556	0RD1504F609	1.5M 1/6W 5 TA52
R561	0RD1001F609	1.0K 1/6W 5 TA52
R562	0RD6201F609	6.2K 1/6W 5 TA52

LOCA. NO	PART NO	DESCRIPTION
R563	0RD6201F609	6.2K 1/6W 5 TA52
R564	0RD2200F609	220 1/6W 5 TA52
R569	0RD1001F609	1.0K 1/6W 5 TA52
R570	0RD1001F609	1.0K 1/6W 5 TA52
R571	0RD0101F609	1.0 1/6W 5 TA52
R572	0RD0101F609	1.0 1/6W 5 TA52
R573	0RD0101F609	1.0 1/6W 5 TA52
R601	0RD0331F609	3.3 1/6W 5 TA52
R604	0RD9100F609	910 1/6W 5 TA52
R606	0RD8200F609	820 1/6W 5 TA52
"	0RD5100F609	510 1/6W 5 TA52 *CF-
R607	0RD8200F609	820 1/6W 5 TA52
R609	0RD0472F609	47 1/6W 5% TA
R610	0RD1501F609	1.5K 1/6W 5 TA52
R756	0RD1601F609	1.6K 1/6W 5 TA52
R757	0RD1601F609	1.6K 1/6W 5 TA52
R758	0RD1601F609	1.6K 1/6W 5 TA52
R800	180-C02L	0.47MOHM 1/2 W 10%
R801	0RD3001F609	3.0K 1/6W 5 TA52
R803	0RD1001F609	1.0K 1/6W 5 TA52
R805	180-A01K	RW ROUND G 2W 0.24 J
"(21")	180-A01M	RW ROUND G 2W 0.22 J
R806	0RD2201F609	2.2K 1/6W 5 TA52
R807	0RS0470K607	0.47 2W 5% TA62
⚠ R809	0RS2002H609	20K 1/2W 5 TA52
⚠ R810	0RS2702J607	27K 1W 5% TA62
⚠ R811	180-822N	RWR 7W 1.0 OHM J
R812	0RD1201F609	1.2K 1/6W 5 TA52
R815	0RD0470H609	0.47 1/2W 5 TA52
R816	0RD2001F609	2.0K 1/6W 5 TA52
R817	0RD1002F609	10K 1/6W 5 TA52
R819	0RS0222J607	22 1W 5% TA62
R820	0RD4703H609	470K 1/2W 5 TA52
R821	0RD3303F609	330K 1/6W 5 TA52
R835	0RS1500J607	150 1W 5% TA62
R836	0RD4701F609	4.70K 1/6W 5% TA52
R841	0RD1601F609	1.6K 1/6W 5 TA52
R846	0RD1001F609	1.0K 1/6W 5 TA52
R847	0RD4701F609	4.70K 1/6W 5% TA52
⚠ R850	180-C02H	RC 1/2W 8.2M K
R901	0RS1802K607	18K 2W 5% TA62
R902	0RD1004H609	1.0M 1/2W 5 TA52
R905	0RD3300F609	330 1/6W 5 TA52
R906	0RD1000F609	100 1/6W 5 TA52
R912	0RS1802K607	18K 2W 5% TA62
R913	0RD0392F609	39 1/6W 5% TA
R915	0RD3300F609	330 1/6W 5 TA52
R916	0RD1000F609	100 1/6W 5 TA52
R918	0RD1501H609	1.5K 1/2W 5 TA52
R919	0RD1501H609	1.5K 1/2W 5 TA52
R920	0RD1501H609	1.5K 1/2W 5 TA52
R921	0RD1000F609	100 1/6W 5 TA52

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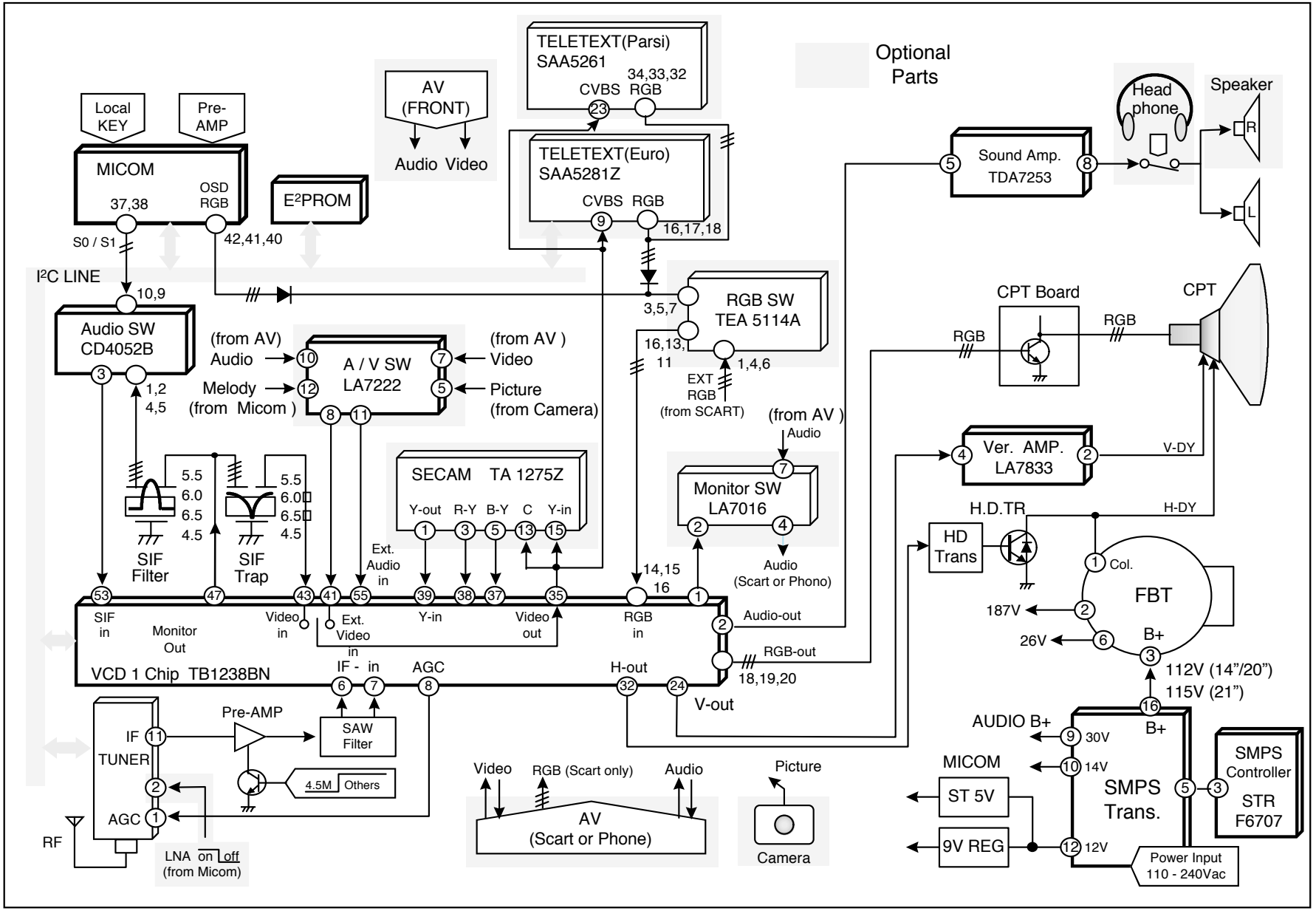
LOCA. NO	PART NO	DESCRIPTION
R922	0RD3300F609	330 1/6W 5 TA52
R923	0RS1802K607	18K 2W 5% TA62
R924	0RS2700K607	270 2W 5% TA62
SWITCH		
SW01	140-315A	SWITCH,TACT SKHV17910B 12V
SW02	140-315A	SWITCH,TACT SKHV17910B 12V
SW03	140-315A	SWITCH,TACT SKHV17910B 12V
SW04	140-315A	SWITCH,TACT SKHV17910B 12V
SW05	140-315A	SWITCH,TACT SKHV17910B 12V
SW06	140-315A	SWITCH,TACT SKHV17910B 12V
⚠ SW801	6600VM1001A	SWITCH,PUSH SDKLA1 UL/CSA 250V 5A
FILTER &CRYSTAL		
F151	166-B02C	FILTER(CIRC),BAND PASS SFSH5.5MCB-TF21
F152	166-B02E	FILTER(CIRC),BAND PASS SFSH6.5MCB-TF21
F153	166-B02D	FILTER(CIRC),BAND PASS SFSH6.0MCB-TF21
F501	166-C02D	FILTER(CIRC),TRAP TPS6.0MB-TF21 6.0MHZ
F502	166-C04C	FILTER(CIRC),TRAP TPWA02B-TF21 5.5/6.0MHZ
X501	156-A01H	CRYSTAL,STANDARD HC49U 4.433619MHZ
Z101	6200VQS001L	FILTER(CIRC),SAW OFWK2971M 39.90MHZ
ACCESSORIES		
A1	3828VA0186D	MANUAL,OWNERS RUS LG RU/EN
A1	3828VA0186L	MANUAL,OWNERS ASIA LG EN 020E/F/017E
A2	6710V00017E	REMOTE CONTROLLER,MONO(W/O EYE),24KEY
A2	6710V00017F	REMOTE CONTROLLER MONO(W/EYE),25KEY
A3	132-210H	ANTENNA,ROD,W/ADAPTER L=650 PAL
A4	450-018C	ADAPTER,ANT.(300 TO 75) PAL
MISCELLANEOUS		
⚠ CPT1	6620VBC001A	SOCKET,CPT 29.1 PHI SINGLE(PCS629-03A)
⚠ F801	0FT4001B53C	FUSE,TIME LAG 4000MA 250 V 5.2X20
PA01	106-047G	PRE-AMP,SBX2020-82 SONY 38KHZ MESH
PJ201	6612VJH004F	JACK,RCA PJ6056F PARK ELEC AV 4P MONO
PJ241	6613V00006C	JACK ASSY,PJ6062C
⚠ TH801	163-012C	THERMISTOR,PTCJ502P54E180M290
TU101	6700VPV002A	TUNER,TAEC-G020D LG C&D PAL DIN WITH
VD801	164-003D	VARISTOR,SVC 561D-14A
X01	166-E05D	RESONATOR,CSTS0800MG03-T2 MURATA 8.0MHZ

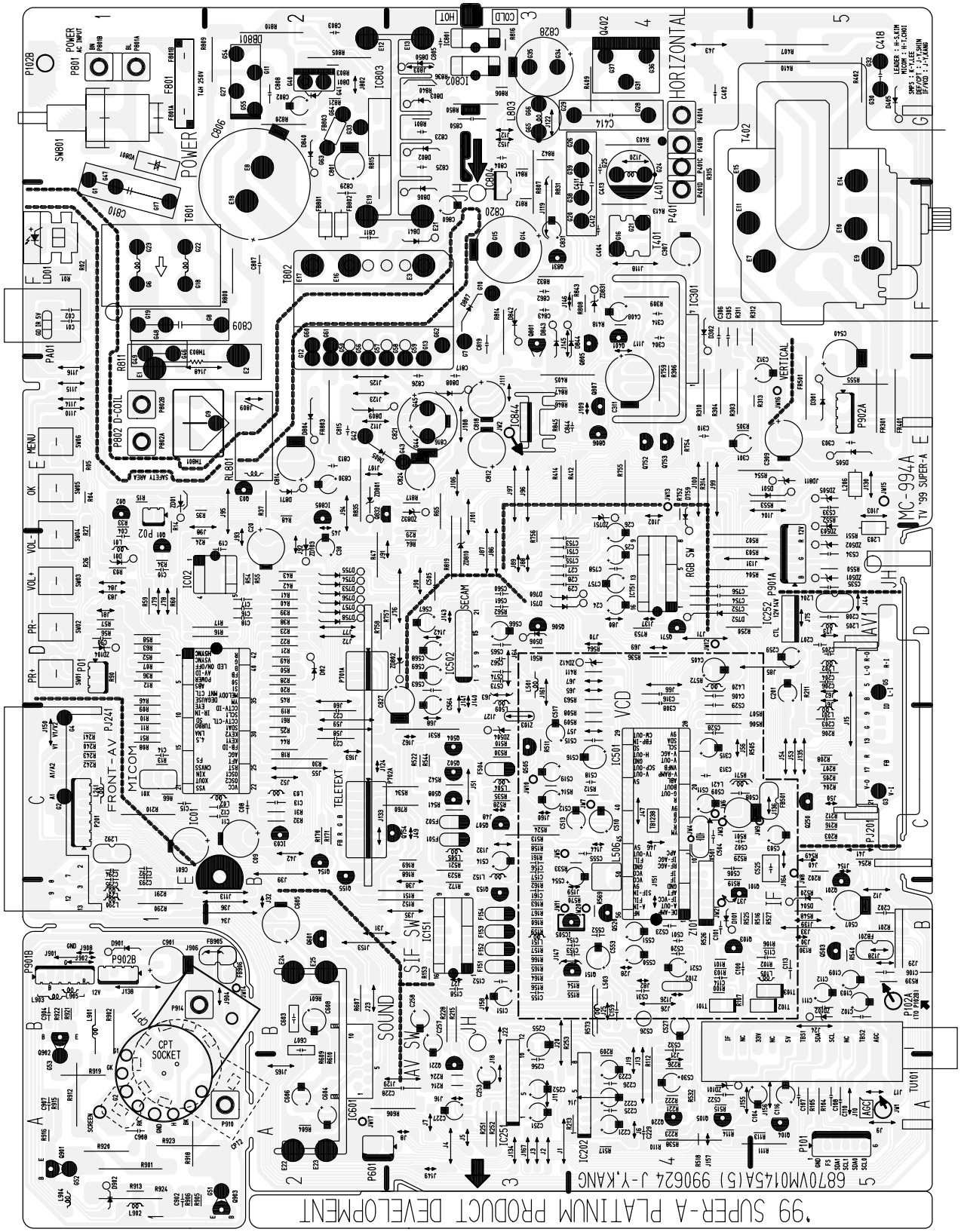
LOCA. NO	PART NO	DESCRIPTION

BLOCK DIAGRAM



PRINTED CIRCUIT BOARD

MAIN



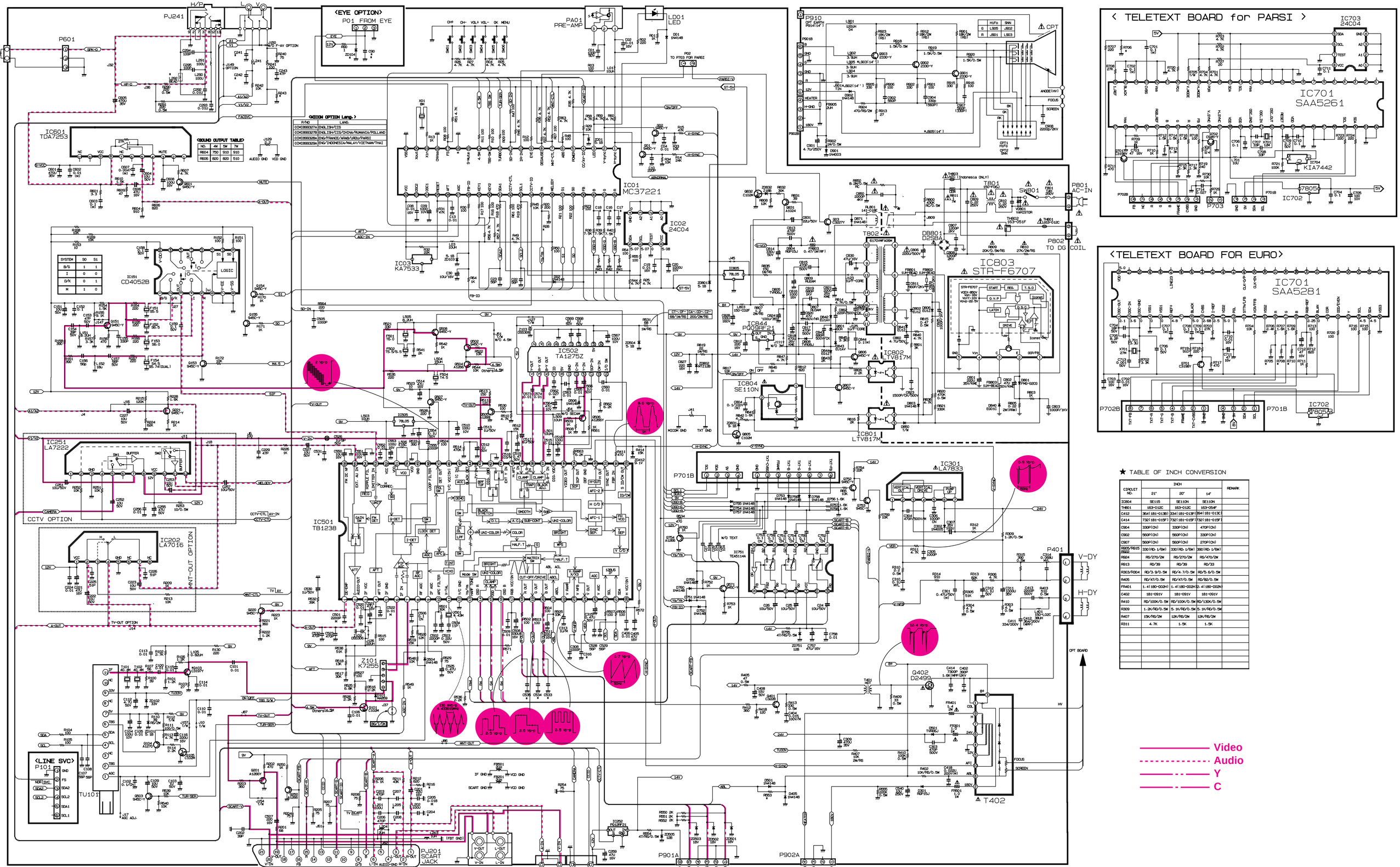
CHASSIS SPEC

#FULL MULTI SYSTEM
#STAND-BY 3W
#TURBO BOOSTER
#CCTV
#EMC REG.
#EURO/PARSI TXT
#TURBO SERCH

MC994A CIRCUIT DIAGRAM

'99 SUPER-A PLATINUM PRODUCT DEVELOPMENT TEAM
PCB SIZE: 319*245
1999.06.26

P/No : 3854VA0057A-S(1/2)
Date : 1999.6.28



★ TABLE OF INCH CONVERSION

CIRCUIT NO.	INCH 21"	INCH 20"	INCH 14"	REMARK
IC804	SE115	SE110N	SE110N	
TH801	163-012C	163-012C	163-054F	
C412	364(181-013B)	334(181-013P)	364(181-013C)	
C414	732(181-015F)	732(181-015F)	732(181-015F)	
C904	330P(CN)	330P(CN)	470P(CN)	
C902	560P(CN)	560P(CN)	330P(CN)	
C907	560P(CN)	560P(CN)	270P(CN)	
R905/R915 R923	330(RD-1/8W)	330(RD-1/8W)	390(RD-1/8W)	
R824	RS/270/2W	RS/270/2W	RS/470/2W	
R913	RD/39	RD/39	RD/33	
R303/R304	RD/3.9/0.5W	RD/4.7/0.5W	RD/5.6/0.5W	
R405	RD/47/0.5W	RD/47/0.5W	RD/82/0.5W	
FR401	1.41(180-002H)	1.41(180-002H)	1.41(180-002N)	
C402	181-091V	181-091V	181-091V	
R410	RD/100K/0.5W	RD/100K/0.5W	RD/130K/0.5W	
R309	1.2K/RD/0.5W	5.1K/RD/0.5W	5.1K/RD/0.5W	
R407	15K/RS/2W	12K/RS/2W	12K/RS/2W	
R311	4.7K	1.5K	1.5K	